

PhD Vacancy

Where:

In Bilthoven, the Netherlands, at the National Institute for Public Health and the Environment (RIVM), Centre for Infectious Diseases Control, Laboratory for Infectious Diseases, Department for Virology (LIS-VIR).

When:

Starting as soon as possible.

Job profile

The candidate will work on the project “Assessing population exposure and immunity to new pandemic norovirus strains”. This project will be carried out by a consortium of LIS-VIR, Rotterdam EMC Virology and the global Noronet- network.

Noroviruses are the most common cause of acute gastro-enteritis, world-wide and in all age groups. In several countries, the incidence of norovirus infections seems to be increasing. Reasons for the increases are not entirely clear, but coincide with emergence of new norovirus variants, resulting from evolutionary changes that influence antigenicity and host receptor binding. In 2002, a particularly successful strain has emerged and advanced phylodynamic analyses have confirmed that since 2002 the virus population has diverged from the stable equilibrium that one would expect to see for an endemic disease, and that the number of effective infections has increased.

The candidate will participate in the development of a systematic approach for the detection of new norovirus variants. Mutations in the viral capsid gene that affect binding to the host receptor and antigenicity of the viruses have been identified, and suggest that the P2 domain of the viral capsid protein is an important antigen for studies of specific antibody.

Furthermore, microarray based serological assays will need to be developed in order to measure incidence of infection with new norovirus variants at the population level in different age groups. Changes in this incidence will be studied by comparative testing of serum samples of randomly selected persons from 2 population serosurveys available at RIVM (1996 and 2006) and from a historic serumbank available in Rotterdam (1970-1980). We also will study the prevalence of prior exposure to related noroviruses, study how that correlates with the incidence of new infections, and explore the possibility of following the influenza model for antigenic cartography.

Requirements

The optimal candidate should have a master (or equivalent) in life sciences (biology or related disciplines). The ideal candidate should furthermore:

- be highly motivated
- have a strong background in immunology
- have excellent communication and networking skills

Terms of employment

- Temporary 4 years
- 36 hrs per week
- Salary level 10A: maximal € 2.673 gross per month, Maximum all-in yearly salary on full time basis is € 37.700 gross
- The performance of the PhD student will be evaluated after 18 months. Should the evaluation be positive, the contract will be extended by another 2.5 years.

Information

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